

#### 21 March 2017

## PFS UPDATE IN RELATION TO THE TELKWA METALLURGICAL COAL PROJECT

#### **HIGHLIGHTS**

- SRK confirms substantial tonnages of metallurgical coal that can be recovered at low strip ratios.
- Sedgman confirms that a thermal dryer is not required for the Telkwa metallurgical coal project to comply with the moisture threshold for market requirements.

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Allegiance Coal Limited (Allegiance or the Company) is pleased to provide a progress update in relation to its pre-feasibility study (PFS) of its Telkwa Metallurgical Coal Project (Project).

Delivery of the PFS remains on schedule for 30 June 2017.

As previously advised by Allegiance on 16 September 2016, the Project comprises 165 million tonnes of compliant coal resources, spread across three pits all within close proximity to each other, as summarized in the following table.

3 PIT AREAS	MEASURED	INDICATED	INFERRED	TOTALS
TENAS	40,329,000	0	0	40,329,000
GOATHORN	35,505,000	26,394,000	27,067,000	88,966,000
TELKWA NORTH	13,279,000	15,643,000	6,345,000	35,267,000
TOTAL	89,113,000	42,037,000	33,412,000	165,562,000

SRK has updated the geological models for all three pits to a prefeasibility level, and have completed pit optimisation models.

The SRK models confirm the accuracy of the published resource tonnages, and perhaps more important, confirm that there are sizable tonnages of coal at lower strip ratios of waste material to coal than typical for British Columbia coal mines.

In the case of the Tenas Pit, which will likely represent the first 10 to 15 years of mining, the strip ratios for preliminary SRK mineable coal tonnages range from (BCM to raw tonnes):

- 8.2Mt at 3:1;
- 12.6Mt at 4:1;



- 17.6Mt at 5:1;
- 25.7Mt at 6:1; to
- 31.5Mt at 7:1.

Mr Malcom Carson, Non Executive Chairman, commented:

"While it is encouraging to have SRK reaffirm the resource tonnages, it is extremely exciting to gain evidence and support for the potential to recover sizable tonnages of Telkwa metallurgical coal at low strip ratios. This is, and has always been, a key driver behind the Board's assessment of the economics of the Project, and a key component of its competitive advantage".

Sedgman has confirmed that Telkwa coal can be processed by their standard configuration for a modular wash plant requiring no special treatment or design, thereby avoiding unnecessary add-on capital or operating costs.

Most importantly, however, Sedgman has also confirmed that there is no need for the coal handling and preparation plant to have a thermal dryer in order to reach the moisture threshold for the shipping of metallurgical coal.

The majority of metallurgical coal in British Columbia requires thermal drying in order to meet market moisture requirements. More recent technology has rendered thermal drying less relevant to British Columbia metallurgical coal and therefore should result in significant capital and operating expenditure savings for Allegiance.

## Mr Carson commented:

"This again reaffirms why we believe the Project is a unique project in British Columbia, with the relative simplicity of its mining, the simplicity of the coal handling and preparation, and the simplicity of its logistics; all pointing to low cost production".

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#### **About Allegiance Coal**

Allegiance Coal is a publicly listed (ASX:AHQ) Australian company fast tracking a metallugical coal mine into production in British Columbia, Canada. The Telkwa metallurgical coal project (**Project**) is the Company's flagship project comprising 165Mt of JORC compliant coal resource and has been the subject of extensive historical exploration. Located 1,000 km north of Vancouver, the Project sits uniquely on the western side of British Columbia, immediately adjacent to a major Canadian National



Rail line, with a 360 km rail haul to the deep water port of Prince Rupert and Ridley Island Coal Terminal. British Columbia has one of Canada's and North America's most competitive, flexible and supportive business climates. Consistently receiving AAA credit ratings, its vast resources, low taxes, stable and well regulated financial system and Government, makes for a wonderful country in which to invest.

## **Competent Person Statement**

The information in this ASX Announcement that relates to Mineral Resources is based on information reviewed and compiled by Mr Dan Farmer, a registered professional engineer with the Association of Professional Engineers and Geoscientists of British Columbia. Mr Farmer is an independent consultant, and has sufficient experience which is relevant to the style of mineralisation and the type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves"). Mr Farmer, as competent person for this announcement, has consented to the inclusion of the information in the form and context in which it appears herein.



# APPENDIX – JORC TABLE 1

Section 1 - Sam	ection 1 - Sampling Techniques and Data			
Criteria	Explanation	Commentary		
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>The records of drilling on the project are those maintained in the Provincial Government archive which are the same as those maintained by the TCL. From 1979 to 1989 the drilling was done for CNRL using top-head drive IR rotary rigs and Longyear 38 diamond core rigs. Core diameter was 1 7/8" NQcore plus some 6" diameter cores. Geophysical logs were run by BPB Instruments and included Gamma, Caliper, Neutron, BRD and LSD Density plus hole deviation surveys. Samples from these programs were sent to the CNRL company laboratory and to Loring Laboratories in Calgary. All coal recovered in coring was sent for analysis. A bulk sampling test pit was also excavated and a 219 tonne sample collected from 7 seams. The samples from this test pit were tested by Birtley Laboratory in Calgary. In 1988 an Acker Hydraulic Diamond rig was used for NQ core sampling. The core samples were collected by the CNRL staff geologists.</li> <li>From 1992 to 1998 the drilling was done for Manalta using top-head drive Failing 1250 and IR rotary rigs and an Acker diamond core rig. Core diameter was 1 7/8" NQ core. Sampling of coal was done by the diamond rig and rotary coring to obtain 10 cm (4") diameter core was also used. Geophysical logs were run by Century Geophysical and included Gamma, Caliper, Resistivity, Density, hole deviation and sometimes dipmeter surveys. Samples from these programs were sent to Loring Laboratories and to Birtley Laboratories in Calgary. All coal recovered in coring was sent for analysis.</li> </ul>		
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	The types of drilling methods used in the 1979 and 1998 programs are previously described. Those programs were completed using various top-head drive truck mounted rotary rigs and different diamond core rigs. The rotary rigs are modified to provide for wireline coring and, sometimes, for angle hole drilling.		



Criteria	Explanation	Commentary
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	Core recovery records are reported on the written core description sheets for each core hole. The average recovery from 1992 to 1998 was typically in the 80% to 100% range and was typically better than that achieved during the CNRL tenure period. There usually are records in the public archive to show what the core recovery estimates were.
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Geophysical logs were run by CNRL from 1979 to 1989 using BPB Instruments and included Gamma, Caliper, Neutron, BRD and LSD Density plus hole deviation surveys. From 1992 to 1998 Manalta used Century Geophysical to run a geophydical log suite that included Gamma, Caliper, Resistivity, Density, hole deviation and sometimes dipmeter surveys.</li> <li>All core holes were also depth-corrected to the geophysical log depths as is industry standard.</li> <li>It is industry standard in the coal industry in Canada for all core to be logged both qualitatively with respect to lithologies and quantitatively with respect to measurement data. Records of the core recoveries are also routinely made and those records are in the public archive.</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	Sub-sampling (core splitting) is not normally practiced in the Canadian coal Industry. Whole core material of each seam or ply, either as single samples or a series of samples by depth increments, are sent to the laboratory for analysis. All coal core samples were bagged on site before being transported to Loring and Birtley Laboratories in Calgary for coal quality test work.



Criteria	Explanation	Commentary
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures</li> </ul>	<ul> <li>Both Loring Labs and Birtley Laboratoratory are ISO 9001 certified, adhere to ASTM preparation and testing specifications and have quality control processes in place.</li> <li>Both laboratories adopt standard quality control procedures and have participated in the International Canadian Coal Laboratories Round Robin Series (CANSPEX).</li> <li>For the programs, geophysical tools were calibrated by the logging companies BPB Instruments and Century Geophysical, using their internal calibration procedures.</li> </ul>
	adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>One objective of the 1990s program of Manalta Coal was to validate the results of the earlier programs of CNRL. This was accomplished and led to Manalta acquiring the property.</li> <li>There are no records of the verification of sample analyzed.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Hole location, survey control benchmarks and the survey location of trenches and other features were contracted by CNRL from 1979 to 1989 to a BCLS land surveyor, D Watson. The results were provided in Latitude and Longitude degrees, minutes and seconds and in UTM (NAD 27) metric values with values to the nearest milimeter and elevations to the nearest decimetre. All locations on the maps in this report are plotted in UTM NAD 27 coordicnates. The survey crews of Manalta Coal Ltd were responsible for establishing the exploration grid and the planned hole locations from 1992 to 1998. The survey crews established ground elevation and hole coordinates after hole completion. Holes were surveyed by using stadia (theodolite) technique.</li> <li>All data is plotted from the survey records of the British Columbia Provincial archive and in the UTM NAD 27 system.</li> <li>Digital topographic data, produced under contract to Manalta was obtained for mine</li> </ul>



Criteria	Explanation	Commentary
		planning topographic control. This topographic data is more than adequate for the present purpose.
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The average distance to the nearest drill hole is about 150 m in the Tenas Area, 100 m in the Goathorn Area and 300 m in the Telkwa North Area. This is much more closely spaced than the recommended minimum spacing as presented in GSC Paper 88-21. GSC Paper 88-21 recommends a maximum distance of 450 m to the nearest data point for measured category and this threshold is readily met in all cases.</li> <li>The data spacing is considered sufficient to give accurate control to the resource model and give the required confidence to the resource areas.</li> <li>Coal quality data is more widely spaced but sufficient for this kind of deposit at this level of investigation.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	The drilling, sampling and testing is so intense on the Telkwa Coal Property that there are no anticipated biases in the sampling and testing results due to geological structural orientation. The orientation and spacing of the drilling grid is deemed to be suitable to detect geological structures to an acceptable level of certainty and to show coal seam continuity within the resource area.
Sample security	The measures taken to ensure sample security.	<ul> <li>In coal exploration in Canada, additional special security methods for the shipping and storage of samples are not commonly employed, as coal is a relatively low value bulk commodity.</li> <li>The exploration on this property was conducted by the exploration staff of the property owner at that time, CNRL and Manalta Coal Ltd. Their procedures are consistent with what was needed for that company to successfully develop and operate many coal mines in western Canada.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>All of the exploration on this property in the 1990s was conducted by the exploration staff of Manalta Coal Ltd.</li> <li>Loring Labs adheres to ASTM procedures for sample preparation. This laboratory is ISO 9001 certified and participates in the International Canadian Coal Laboratories Round Robin Program (CANSPEX).</li> <li>Likewise, Birtley adheres to ASTM procedures for sample preparation. This laboratory is ISO 9001 certified and participates in the International Canadian Coal Laboratories Round</li> </ul>



Criteria	Explanation	Commentary
		Robin Program (CANSPEX) and uses ASTM procedures for sample preparation and testing.  • All drill hole and analytical data that is available is stored and retained in a database maintained by the Provincial Government of British Columbia.

**Section 2 - Reporting of Exploration Results** 

Criteria	Explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.  The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	<ul> <li>According to the Provincial Government records, the coal licences the subject of the Telkwa property cover an area of 10,392 ha that are in good standing until the end of 2016. The Telkwa Coal Property also includes Freehold leases covering an area of 1,301 ha and there is no term for these leases.</li> <li>The Crown Coal Licenses are subject to annual lease rental fees and to the payment to the Province of coal royalties on production. There are various private royalties that apply to many of the Crown and Freehold Leases. In some cases there are as many as three private royalties referred to as "the Wheaton Royalty", "the Shell Royalty" and "the Bulkley Royalty" that apply to individual lease blocks.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Cyprus and Canex drilled a poorly documented series of holes from 1969 to 1978; these are not used in this study. From 1979 to 1989 CNRL conducted several programs of drilling and drilled a total of 272 holes in these programs and cored a total of 49 of them. From 1992 to 1998 Manalta Coal conducted several programs of drilling. Manalta drilled a total of 556 holes in these programs and cored a total of 458 of them.
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The deposit type for the Telkwa Coal Property is described in detail in Section 8 of the Report and the geological setting and style of mineralization is discussed in Section 7.</li> <li>The deposit type for the Tenas Project Area of this property is described as "Moderate" in accordance with the criteria of GSC Paper 88-21. The deposit type for the Telklwa North and Goathorn Project Areas is described as "Complex". The mineralization is coal seams located in the central British Columbia; more than 500 m of coal-bearing strata, referred to as the Lower Cretaceous Skeena Group are present in this area The Tenas area includes up to 13 seams in coal unit UI with a cumulative coal thickness of 11.6 m over an interval of about 55 m. In the Goathorn and Telkwa North Areas the coal is mainly in UIII which lies an</li> </ul>



Criteria	Explanation	Commentary
Drill hole Information	average of 140 m below UI. There as seams in UIII with an average cumul thickness of 20.5 m over an interval  on the Telkwa Coal Property a total documented holes have been drilled holes, including core holes, were dri CNRL from 1979 to 1989 and 556 by from 1992 to 1998. Core drilling stat company have been previously described to the seams in UIII with an average of 140 m below UI. There as seams in UIII with an average of 140 m below UI. There are seams in UIII with an average cumul thickness of 20.5 m over an interval documents.	average of 140 m below UI. There are up to 17 seams in UIII with an average cumulative thickness of 20.5 m over an interval of 85 m.  On the Telkwa Coal Property a total of 828 well documented holes have been drilled. 272 of the holes, including core holes, were drilled by CNRL from 1979 to 1989 and 556 by Manalta from 1992 to 1998. Core drilling statistics by company have been previously described A full list of the drill holes used in the resource
	<ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> </ul>	estimates, including easting, northing, elevation and total dept is presented in Appendix A, Table 1 of the Report; all holes were drilled vertically at the collar.
	<ul> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul>	
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> </ul>	For the Telkwa Coal Property no aggregation methods, other than the minimum coal thickness and maximum non-separable parting thickness criteria were used for coal and waste discrimination. The numerical values for these parameters are shown later in this table. Other than this, no quality or geological aggregation has been applied to the coal ply intervals.
	<ul> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
Relationship between mineralisati	These relationships are particularly important in the reporting of Exploration Results.	All holes were drilled vertically.



Criteria	Explanation	Commentary
on widths and intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	All illustrations are provided as Section 28 of the Report. Illustrations include diagrams of the stratigraphy and coal sections and a regional location plat. Example cross-sections are provided along with a drill hole and lease base map. A resource distribution and classification map is also included.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All of the coal quality test results that are available from the Provincial archive and these results are too numerous to include in this table or even in the main text of the Report. However, Section 13 includes several summary tables of the results. The Report includes an extensive multi-page listing of the drill-holes used as Appendix A, Table 1 showing the Hole ID, Easting, Northing, Collar Elevation and Total depth in each case.  Table 7.3 in the Report shows the average, maximum and minimum thicknesses for the combined coal in each of the named seam zones.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	There is limited outcrop in this license and lease area and the surface is mostly vegetated and surficial material covered. However the coal deposits in this area have not only been drilled but also surveyed using geophysical methods, mostly shallow seismic. Bulk Samples have also been collected for coal quality testing. All of these tests and surveys, which are extensive are described and discussed in Sections 6, 9, 10, 11 and 13 of the Report.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological</li> </ul>	No further exploration will be required to advance this project to a Pre-Feasibility study but further testing especially to address geotechnical and environmental issues will be required beyond a Pre-Feasibility Study.



Criteria	Explanation	Commentary
	interpretations and future drilling	
	areas, provided this information is	
	not commercially sensitive.	

	mation and Reporting of Mineral Resources	
Criteria  Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.      Data validation procedures used.	This aspect is discussed in Section 12 of the Report. The geophysical logs for all holes used in this study were used as the basis for the determination of depth and thickness of each lithological unit. Upon tabulation of data for each drill hole the total thickness of all lithological units was compared with the total depth for the same combined interval on the geophysical logs.
Site visits	<ul> <li>Comment on any site visits         undertaken by the Competent Person         and the outcome of those visits.</li> <li>If no site visits have been undertaken         indicate why this is the case.</li> </ul>	This aspect is discussed in Section 2 of the report. There are no current exploration and development activities for coal ongoing at this site. The sites of exploration work conducted by Manalta and CNRL from 1979 through the late 1990s the 1990's were visited and evidence of past abandoned coal mining was seen in the Goathorn Area. Locally some natural and manmade trenching exposures were seen. The local physiographic condition and transportation infrastructure were inspected.
Geological interpretati on	<ul> <li>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>This aspect is discussed in Sections 7 and 12 of the Report. This coal deposit is located in the central BC structural environment; in the Tenas Project Area folds are large scale and faults are infrequent but in the Goathorn and Telkwa North Project Areas the tectonic depromation is more intense. However, given the high hole density in the subject area, the geological interpretations of structure and seam stratigraphy are considered to be known to a high degree of confidence.</li> <li>The only geological assumptions that have been made are for the continuity of the seams as identified from one drill hole to the adjacent ones except where they do not continue due to normal stratigraphic and depositional processes. There are assumptions that have been made regarding resource estimation and these are separately discussed.</li> <li>The geological interpretation method is deterministic, which is the normal industrywide approach to coal deposits in this region. Drill hole data and shallow seismic survey data is the basis for the geologic interpretations. Other geological structural interpretations are possible but the current exploration data density is so high that the coal quality and mineral resource estimate results are not likely</li> </ul>



Criteria	Explanation	Commentary
		to change significantly from the estimates presented in the report text.  The mineral resource estimation is entirely based on the geological interpretation. The deterministic geological interpretation was imported into a computer system that was used to produce a gridded seam and block models of the layered sequence.  Geologic continuity can be affected by faults as occur in the Telkwa North and Goathorn Project Area. "Pinches", "swells" and "splitting" can causes some modification of the seam continuity and development from placetoplace. The analytical data for the core holes and bulk samples show that changes of quality are relatively minor. On the basis of coal quality alone a suitable export coal that satisfies the requirements of the export coal market can normally be produced.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	This aspect is discussed in Sections 7, 12 and 14 of the Report. The three potential development areas have the following geographic limits:  Tenas Project Area: Length = 3,500 m, Width = 1,900 m, Maximum Depth = 160 m; Goathorn Project Area: Length = 3,800 m, Width = 1,400m, Maximum Depth = 400 m; Telkwa North Project Area: Length = 4,000 m, Width = 1,500 m, Maximum Depth = 370 m.
Estimation and modelling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> </ul>	<ul> <li>This aspect is discussed in Sections 12 and 14 of the Report. The resource model for the Telkwa Coal Property was developed using Mintec's geological modelling and mine planning software, Minesight®.</li> <li>This system is widely used throughout the mining industry for digital resource model development. The selected grid cell size was based on the density of the drill hole dataset. The selected cell size was 25 m by 25 m by 5 m vertically in the Telkwa North Area, 25 m by 25 m by 10 m vertically in the Goathorn Area and 10 m by 10 m by 5 m vertically in Tenas Area.</li> <li>The Geological Type is classified as "Moderate" in the Tenas Project Area and "Complex" in the Goathorn and Telkwa North Project Areas.</li> <li>The depth limit for the potential surface mineable resource was based on a cut-off ratio limit of 20:1 m3/tonne, at the discretion of the Qualified Person.</li> <li>Seam specific coal densities were used for the conversion of in-place volumes to in-place tonnes (see below).</li> <li>The resource areas include a provision at the topography to allow for a layer of glacial till that masks most of the bedrock in this area. The till thickness ranges from about 4 m to about 85 m</li> </ul>



Criteria	Explanation	Commentary
	<ul> <li>interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>at Goathorn, 0 to 45 m at Telkwa North and 4 m to 38 m at Tenas.</li> <li>Coal thicknesses were determined from drill hole intersections on the property, as shown in the geophysical logs for each hole.</li> <li>Mining options are not addressed in this report and the selection of such equipment determines the minimum thickness of potential mining units; the potential for selective mining of this deposit will not be known until such a mining and economic study is complete.</li> <li>Since this is a coal deposit, grade capping and grade cutting are not applicable.</li> </ul>
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	This aspect is discussed in Section 13 of the Report. The tonnages are reported on an As Received Basis with natural moisture included. The moisture content is determined from the results of Proximate Analysis laboratory testing.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	<ul> <li>This aspect is described in Section 14 of the Report. The following are the assumptions incorporated in the resource estimate.</li> <li>Geological Type for resources suitable for surface mining is Moderate in the Tenas Project Area and Complex in the Goathorn and Telkwa North Project Areas.</li> <li>Minimum seam thickness of 0.5 m in the Tenas Project Area and 0.8 m in Goathorn and Telkwa North Project Areas.</li> <li>Cut-off ratio does not exceed the value specified of 20:1 m3/tonne;</li> <li>Maximum included parting thickness of 0.3 m at Tenas and 0.5 m at both Telkwa North and the Goathorn Project Areas. Data spacing is consistent with GSC Paper 88-21 requirements.</li> </ul>
Mining factors or assumption s	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining	The targeted coal seams on the Telkwa Coal Property are suitable for opencut operations using the truck/shovel mining method. It is expected that the mining conditions for the Telkwa Coal Property will be very similar to those of western Canadian Foothills and Mountains coal mines which also use the truck/shovel method.



Criteria	Explanation	Commentary
	methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgic al factors or assumption s	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>This aspect is addressed in Section 13 of the Report. The coal from this thin property is directed to the export market and requires washing to meet the required market specification. This is accounted for in estimates of the Clean Coal Reserve, produced from the Coal Reserve (ROM coal), but those quantities are not estimated in the present report as a mine plan, based on current economic and market conditions, has not yet been produced.</li> <li>The economic potential of the Telkwa Coal Property, changes depending on market demand and on coal prices; they do not significantly vary for the kind of coal at Telkwa based on changes in the demand for different quality specifications.</li> <li>According to the CIM definitions which are the same those of JORC, "eventual economic extractions" for coal deposits may be as long as 50 years or more. It is most likely that the Telkwa Coal Property will be a producing deposit within that time frame. All the coal quality and processing assumptions that apply to the Telkwa Coal Property are reasonable.</li> </ul>
Environmen tal factors or assumption s	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	This aspect is addressed in Section 18 of the Report. The Telkwa Coal Property overburden sequence has been extensively tested for Acid Rock Drainage (ARD) effects. It is known that such effects will have to be addressed in waste rock dispoal systems and in dump management and ongoing mine operations. In all cases of coal mine permitting and development in Western Canada, including the Telkwa Coal Property, there is a specific requirement for the evaluation of waste-rock weathering, contamination for Acid Rock Drainage and Selenium contamination. These aspects will be addressed in future exploration and mine design and in the EIA that has to be prepared as part of the mine permitting activity.
Bulk density	Whether assumed or determined. If assumed, the basis for the	Seam specific coal densities were used for the conversion of in-place volumes to in-place



Criteria	Explanation	Commentary
	assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.  • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.  • Discuss assumptions for bulk density estimates used in the evaluation	tonnes. The basis for this is analytical data from past exploration programs, as provided by the client and from public reports of exploration on this property as can be seen on the public web site of the BC Provincial Ministry of Mines.
Classificatio n	The basis for the classification of the Mineral Resources into varying confidence categories.	The Resource Estimate was prepared in accordance with the requirements of the Canadian National Instrument (NI) 43-101 and the CIM Definition Standards. NI 43-101 is the
	<ul> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>Canadian equivalent of the JORC Standard.</li> <li>The mineral resources are classified as to the assurance of their existence into one of three categories JORC equivalent categories Measured, Indicated and Inferred. The category to which a resource is assigned depends on the level of confidence in the geological information available (CIM Definition Standards –GSC Paper 88-21).</li> <li>The results for classification and estimation of resources for the Telkwa Coal Property are as</li> </ul>
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	expected and reflect the Competent     Person/Qualified Person's view of the deposit.      The Report author conducts a review of all of its projects and reports before they are released.     In this case no discrepancies other than minor text errors were identified.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	<ul> <li>The resource quantity estimates were considered acceptable by the Qualified Person during the classification of the resources. They are consistent with similar estimates for other coal in western Canada, per unit of land area.</li> <li>The accuracy of resource estimates is, in part, a function of the quality and quantity of available data and of engineering and geological interpretation and judgment by the Qualified Person.</li> <li>Based on the historical drill hole data, the resource estimate is considered reasonable.</li> <li>There is no guarantee that all or any part of the estimated resources will be recoverable.</li> </ul>



Criteria	Explanation	Commentary
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	
	<ul> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	